

AMENDMENTS TO THE CLAIMS

1. (currently amended) A surgical instrument having a proximal end comprising a handle and a distal end located opposite the proximal end in an axial direction, the instrument comprising:

a nozzle located at the distal end of the instrument that is shaped to form a liquid jet;

a pressure lumen configured and positioned to convey a flow of liquid to the nozzle;

an evacuation lumen located between the nozzle and the proximal end of the instrument in the axial direction, comprising a jet-receiving opening located opposite the nozzle to receive at least a portion of the liquid jet emitted from the nozzle, when the instrument is in operation, and which is configured and positioned to convey a flow of liquid away from the jet-receiving opening; and

a ~~non-liquid jet-curette~~ tissue-excision component constructed and positioned at the distal end of the instrument to excise tissue during the surgical procedure, the ~~non-liquid jet-curette~~ tissue-excision component comprising a body portion located substantially opposite the jet-receiving opening and extending radially outward from a location defined by an axial center of the nozzle to a radial periphery, and having a sharpened edge located at the radial periphery and extending circumferentially about the ~~non-liquid jet tissue-excision component body~~ portion[[and]] in a direction substantially perpendicular to the axial center of the nozzle;[[and]]

wherein the nozzle is positioned between the jet-receiving opening and a portion of the ~~non-liquid jet-curette~~ tissue-excision component so that, during operation of the instrument, the liquid jet is directed so as to contact tissue excised by the ~~non-fluid jet-curette~~ tissue-excision component during a surgical procedure.

2. (currently amended) The surgical instrument of claim 1, wherein the ~~non-liquid jet-curette~~ tissue-excision component is configured to be non-rotating ~~not rotate~~, when the instrument is in operation.

3. (currently amended) The surgical instrument of claim 2, wherein the ~~non-liquid jet-curette~~ tissue-excision component is configured to remain stationary with respect to the position of the nozzle.

4. (canceled)

5. (canceled)

6. (currently amended) The surgical instrument of claim 1, wherein the body portion of the curette tissue-excision component comprises:

~~further comprising:~~

a cup-shaped tissue receptacle configured and positioned to contain tissue excised by the curette tissue-excision component, wherein the nozzle is positioned, during operation of the instrument, to direct the liquid jet so that at least a portion of the liquid jet is contained within the receptacle.

7. (canceled)

8. (currently amended) The surgical instrument of claim ~~[[1]]~~6, wherein at least a portion of ~~a~~the rim of the receptacle is sufficiently sharp to form a tissue-cutting blade comprising the sharpened edge of the ~~non-liquid jet~~ body portion of the curette tissue-excision component.

9. (canceled)

10. (canceled)

11. (original) The surgical instrument of claim 1, wherein the pressure lumen is configured to enable it to convey a high-pressure liquid at a pressure of at least 1,000 psig.

12. (original) The surgical instrument of claim 11, wherein the pressure lumen is configured to enable it to convey a high-pressure liquid at a pressure of at least 2,000 psig.

13. (original) The surgical instrument of claim 12, wherein the pressure lumen is configured to enable it to convey a high-pressure liquid at a pressure of at least 3,000 psig.

14. (original) The surgical instrument of claim 13, wherein the pressure lumen is configured to enable it to convey a high-pressure liquid at a pressure of at least 5,000 psig.

15. (original) The surgical instrument of claim 14, wherein the pressure lumen is configured to enable it to convey a high-pressure liquid at a pressure of at least 10,000 psig.

16. (original) The surgical instrument of claim 15, wherein the pressure lumen is configured to enable it to convey a high-pressure liquid at a pressure of at least 15,000 psig.

17. (original) The surgical instrument of claim 16, wherein the pressure lumen is configured to enable it to convey a high-pressure liquid at a pressure of at least 30,000 psig.

18. (canceled)

19. (canceled)

20. (currently amended) The surgical instrument of claim 1, wherein the evacuation lumen is shaped and positioned to enable it to remove from a surgical site at least a portion of the tissue excised by the tissue–excision component during operation.

21. (currently amended) The surgical instrument of claim 1, wherein the distal end of the surgical instrument is adapted to perform a surgical procedure on a patient, wherein the distal end of the surgical instrument has a shape and a size selected to facilitate insertion of the distal end into a region of the body of the patient defining a surgical site.~~further comprising:~~

~~a distal end adapted to perform a surgical procedure on a patient, wherein the distal end of the surgical instrument has a shape and size selected to facilitate insertion of the distal end into a region of the body of the patient defining a surgical site.~~

22. (currently amended) The surgical instrument of claim 21, wherein the region of the body of the patient defining ~~[[a]]~~the surgical site is the spine of the patient.

23. (canceled)

24. (previously presented) The surgical instrument of claim 1, wherein the evacuation lumen is

shaped and positionable to enable evacuation of essentially all of the liquid comprising the liquid jet from the jet-receiving opening to the proximal end of the instrument, without the need for an external source of suction.

25. (previously presented) The surgical instrument of claim 1, wherein the proximal end is adapted to facilitate control of the instrument by an operator.

26. (original) The surgical instrument of claim 25, wherein the handle comprises a grasping region shaped and positioned to facilitate gripping by a hand of an operator of the instrument.

27-30. (canceled)

31. (original) The surgical instrument of claim 1, wherein a distance separating the jet-receiving opening of the evacuation lumen from the nozzle defines a length of the liquid jet emitted from the nozzle.

32-38. (canceled)

39. (original) A kit comprising the surgical instrument of claim 1, in combination with instructions directing an operator to dispose of at least a portion of the instrument after a single use.

40. (original) The kit of claim 39, wherein the instructions direct an operator to dispose of only a portion of the instrument after a single use and to reuse the remainder of the instrument.

41. (currently amended) The kit of claim 40, wherein the instructions direct an operator to dispose of at least one of the pressure lumen, the evacuation lumen, the nozzle, and the ~~non-~~liquid jet-curette tissue-excision component.

42. (original) The kit of claim 39, wherein the instructions direct an operator to dispose of the entire instrument after a single use.

43. (currently amended) The surgical instrument of claim 1, wherein the liquid jet emitted by the nozzle and directed so as to contact the tissue excised by the ~~non-fluid jet~~ curette tissue-excision component is able to cut at least a portion of the excised tissue and drive at least a portion of the excised tissue into and at least partially through the evacuation lumen.

44. (withdrawn) A surgical instrument having a proximal end and a distal end opposite the proximal end, the surgical instrument comprising:

- a scissors-like handle located at the proximal end, wherein the handle moves a component of the distal end of the instrument to effect tissue manipulation when the handle is squeezed;

- a nozzle located at the distal end of the instrument that is shaped to form a liquid jet;

- a pressure lumen configured and positioned to convey a flow of liquid to the nozzle;

- an evacuation lumen located between the nozzle and the proximal end of the instrument, the evacuation lumen comprising a jet-receiving opening located opposite the nozzle to receive at least a portion of the liquid jet emitted from the nozzle, when the instrument is in operation, and which is configured and positioned to convey a flow of liquid away from the jet-receiving opening; and

- a non-liquid jet, non-rotating tissue-excision component constructed and positioned to excise tissue during the surgical procedure.

45. (withdrawn) The surgical instrument of claim 44, further comprising:

- a tissue receptacle configured and positioned to contain tissue excised by the non-liquid jet, non-rotating tissue-excision component, wherein the nozzle is positioned, during operation of the instrument, to direct the liquid jet so that at least a portion of the liquid jet is contained within the receptacle.

46. (withdrawn) The surgical instrument of claim 45, wherein the tissue receptacle is cup-shaped.

47. (withdrawn) The surgical instrument of claim 44, wherein the pressure lumen is configured to enable it to convey a high-pressure liquid at a pressure of at least 1,000 psig.

48. (withdrawn) The surgical instrument of claim 44, wherein the evacuation lumen is shaped and positioned to enable it to remove from a surgical site at least a portion of tissue excised by the non-liquid jet, non-rotating tissue-excision component during operation.

49. (withdrawn) The surgical instrument of claim 44, wherein the evacuation lumen is shaped and positionable to enable evacuation of essentially all of the liquid comprising the liquid jet from the jet-receiving opening to a proximal end of the instrument, without the need for an external source of suction.

50. (withdrawn) The surgical instrument of claim 44, wherein the distal end of the surgical instrument has a shape and size selected to facilitate insertion of the distal end into a region of the body of the patient defining a surgical site.

51. (withdrawn) The surgical instrument of claim 50, wherein the region of the body of the patient defining a surgical site is the spine of the patient.

52. (withdrawn) The surgical instrument of claim 44, wherein the surgical instrument comprises a device selected from the group consisting of: a rongeur, a bone punch, bone-cutting forceps, a morcellator, and a surgical micrograsper.

53. (canceled)

54. (canceled)

55. (previously presented) A surgical instrument having a proximal end comprising a handle and a distal end located opposite the proximal end, the surgical instrument comprising:

a non-liquid jet tissue-excision component constructed and positioned to excise tissue during a surgical procedure, wherein the non-liquid jet tissue-excision component comprises a cup-shaped tissue receptacle having a sharpened peripheral rim located at the distal end of the instrument, the sharpened peripheral rim extending circumferentially about the non-liquid jet tissue-excision component;

the tissue receptacle configured and positioned to capture excised tissue;

a nozzle located at the distal end of the instrument that is shaped to form a liquid jet and is positioned to direct the liquid jet towards the proximal end of the instrument so that at least a portion of the liquid jet is contained within the cup-shaped tissue receptacle, when the instrument is in operation; and

a pressure lumen configured and positioned to convey a flow of liquid to the nozzle.

56. (canceled)

57. (canceled)

58. (canceled)

59. (original) The surgical instrument of claim 55, wherein the surgical instrument comprises a curette.

60. (original) The surgical instrument of claim 55, wherein at least an outlet portion of the nozzle is contained within the receptacle.

61-67. (canceled)

68. (currently amended) A surgical instrument having a proximal end comprising a handle and a distal end located opposite the proximal end, the surgical instrument comprising:

a curette device comprising:

a nozzle located at the distal end of the instrument that is shaped to form a liquid jet and positioned to direct the liquid jet towards the proximal end of the instrument;

a pressure lumen configured and positioned to convey a flow of liquid to the nozzle; and

a ~~non-liquid jet~~ curette tissue-excision component constructed and positioned at the distal end of the instrument to excise tissue during a [[the]] surgical procedure, the ~~non-liquid jet~~ curette tissue-excision component comprising an excision portion ~~located substantially opposite the jet-receiving opening and extending outward from a location defined by an axial center of the nozzle to a periphery, and having a sharpened edge~~

located at the periphery and extending circumferentially about the ~~non-liquid jet tissue-~~
~~excision component~~ excision portion[[and]] in a direction substantially perpendicular to
the axial center of the nozzle.

69. (original) The surgical instrument of claim 68, wherein the curette device further comprises:
an evacuation lumen comprising a jet-receiving opening locatable opposite the nozzle to
receive at least a portion of the liquid jet emitted from the nozzle, when the instrument is in
operation, and which is configured and positioned to convey a flow of liquid away from the jet-
receiving opening.

70-74. (canceled)

71. (new) The surgical instrument of claim 68, wherein the excision portion comprises:
a cup-shaped tissue receptacle configured and positioned to contain tissue excised by the
curette tissue-excision component, wherein the nozzle is positioned, during operation of the
instrument, to direct the liquid jet so that at least a portion of the liquid jet is contained within
the receptacle.